IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of
Hiroyoshi TSUCHIYA et al.
Serial No. 09/848,439 Group Art Unit: 1771
Filed: May 4, 2001 Examiner: John J. Guarriello
For: WATER-ABSORBING COMPOSITES, PREPARATION PROCESSES THEREOF AND WATER-ABSORBING ARTICLES

DECLARATION UNDER 37 CFR 1.132

Honorable Commissioner of Patents and Trademarks,
Washington, D.C. 20231

Sir:

I, Yasunari Sugyo, the undersigned, a citizen of Japan, residing at 19-21, Katsube-cho, Moriyama-shi, Shiga-ken, Japan, hereby declare and state that I graduated from Master Course, Department of Chemistry, Kyusyu University, Japan, in March, 1987 and I was employed by Mitsubishi Petrochemical Co., Ltd. on April 1, 1987, which company merged into Mitsubishi Chemical Corporation on October 1, 1994, the assignee of the above-identified U.S. patent application and I have been principally engaged in research and development of highly water-absorbing polymers.

I declare further that I have read all of the documents contained in the file wrapper of the application.

I declare further that the analysis described below was conducted at my direction and under my supervision and the described matters are true and correct to the best of my knowledge.

1. SUMMARY

In the official action mailed May 25, 2003, the Examiner states that Masaki et al., U.S. Patent No. 5,821,179 describes the essential limitations of the claimed invention and therefore Claims 1-23, 32 and 34-51 are rejected under 35 U.S.C. 102(b) as being anticipated by Masaki et al. The Examiner also states that Claim 33 is rejected under 35 U.S.C. 103(a) as being obvious over Masaki et al. in view of Tsuchiya et al., U.S. Patent No. 5,962,068. Contrary to the Examiner's position, the following analysis shows that the samples used in Masaki et al. do not satisfy the claimed conditions and the claimed invention is novel and unobvious over the cited references.

2. ANALYSIS

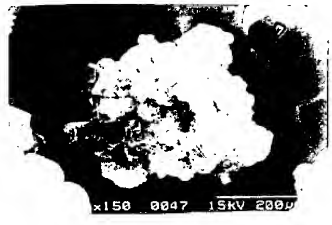
Masaki et al. uses the following superabsorbent polymers in preparation of the absorbent sheets in Examples:

In Examples 1-5, "Polymer Q" produced by Kao Co.

In Examples 6-16, "Aquaric CAW-4" produced by Nippon Shokubai Kagaku Kogyo Co., Ltd.

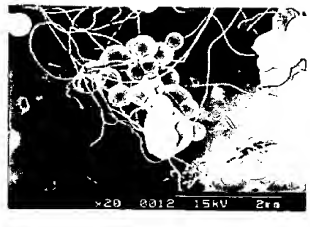
In order to conduct an analysis, I obtained a superabsorbent polymer from the diaper "Super Merries" produced by Kao Corp and obtained "Aquaric CAW-4" from the diaper "Pumpers" produced by P&G. With regard to these samples, I measured average particle diameter (D), average relative displacement of the direction by direction analysis (θ), frequency analysis 5Hz/20Hz intensity ratio (k) and agglomerate maximum length / minimum length ratio (L/l) in the same manner as described in the specification. The results and SEM photographs are shown below. For comparison, the data of the claimed aggregates in the SEM photographs below are also shown in the table.

Sample	Kao	P&G	Claimed Invention (1)	Claimed Invention (2)
D	330	345	1800	1950
θ	26.6	8.3	18.6	19.4
k	0.57	0.76	0.70	0.75
L/l	1.1	1.5	1.5	1.5

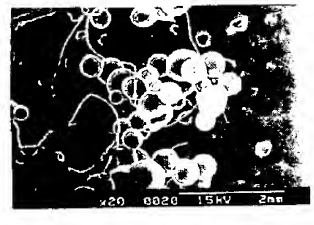


Kao

P&G



Claimed Invention (1)



Claimed invention (2)

3. DISCUSSION

The above results show that the superabsorbent polymers used in Masaki et al. differ from the claimed agglomerates of water-absorbing polymer particles. To the best of my knowledge, there had been provided no agglomerates of water-absorbing polymer particles that satisfy all of the

claimed conditions before the claimed invention was made. The claimed agglomerates were successfully produced for the first time by the specific method disclosed in the specification of the application. In this regard, Masaki et al. is silent of method for producing agglomerates of water-absorbing polymer particles. Tsuchiya et al. merely produces water-absorbent polymers in a particulate form on the substrate (see column 9, lines 34-36) and is silent of steps for producing agglomerates.

I therefore believe that no one skilled in the art reading Masaki et al. and Tsuchiya et al. could have easily produced the claimed agglomerates of water-absorbing polymer particles before the claimed invention was made. I also believe that no one skilled in the art reading Masaki et al. and Tsuchiya et al. could have readily predicted the advantageous effects of the claimed invention that is fully explained in the specification of the application. Claims 1-23, 32 and 34-51 are thus patentable over Masaki et al. and Claim 33 is patentable over Masaki et al. in view of Tsuchiya et al.

I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application of any patent issuing thereon.

Dated this 15th day of July, 2003

Yasunari Sugyo